

CLAIMS

What is claimed is:

- 1 1. A system comprising:
2 a battery;
3 a super-capacitor (SC) coupled in parallel to the battery;
4 a computer system coupled to the battery and the SC; and
5 a current limiter, coupled to the battery, the SC and the computer system,
6 that prevents excess current from flowing from the battery to the SC.
- 1 2. The system of claim 1 wherein the current limiter prevents excess current
2 from flowing from the SC to the battery.
- 1 3. The system of claim 1 wherein SC prevents transients from the computer
2 system from affecting the battery voltage.
- 1 4. The system of claim 3 wherein SC has a capacitance of 20 farad and a
2 resistance of 5 m .
- 1 5. The system of claim 1 wherein the computer system comprises:
2 a power delivery subsection; and
3 a plurality of hardware components coupled to the power delivery
4 subsection.

1 6. The system of claim 5 wherein the power delivery subsection comprises:
2 a system voltage regulator;
3 a chipset voltage regulator; and
4 a central processing unit (CPU) voltage regulator.

1 7. The system of claim 2 wherein the current limiter comprises:
2 a first transistor coupled to the battery;
3 a second transistor coupled to the first transistor; and
4 a resistor coupled to the second transistor, the SC and the computer
5 system.

1 8. The system of claim 7 wherein the current limiter further comprises:
2 a first comparator with inputs coupled across the resistor and an output
3 coupled to the gate of the second transistor; and
4 a second comparator with inputs coupled across the resistor and an
5 output coupled to the gate of the first transistor.

1 9. The system of claim 8 wherein the first comparator deactivates the second
2 transistor if the voltage across the resistor is greater than a first predetermined
3 threshold.

1 10. The system of claim 9 wherein the second comparator deactivates the first

2 transistor if the voltage across the resistor is greater than a second predetermined
3 threshold.

1 11. A system comprising:

2 a battery;

3 a super-capacitor (SC) coupled in parallel to the battery;

4 a power delivery system coupled to the battery and the SC; and

5 a current limiter, coupled to the battery, the SC and the power delivery

6 system, that prevents excess current from flowing from the battery to the SC.

1 12. The system of claim 11 wherein the current limiter prevents excess current

2 from flowing from the SC to the battery.

1 13. The system of claim 11 wherein SC prevents transients from the computer

2 system from affecting the battery voltage.

1 14. The system of claim 11 wherein the power delivery system comprises:

2 a first voltage regulator; and

3 a second voltage regulator.

1 15. A current limiter comprising:

2 a first transistor coupled to a battery;

3 a second transistor coupled to the first transistor; and

4 a resistor coupled to the second transistor, and a super-capacitor (SC);
5 wherein the current limiter prevents excess current from flowing from the
6 battery to the SC.

1 16. The current limiter of claim 15 further comprising:

2 a first comparator with inputs coupled across the resistor and an output
3 coupled to the gate of the second transistor; and

4 a second comparator with inputs coupled across the resistor and an
5 output coupled to the gate of the first transistor.

1 17. The current limiter of claim 16 wherein the first comparator deactivates
2 the second transistor if the voltage across the resistor is greater than a first
3 predetermined threshold.

1 18. The current limiter of claim 17 wherein the second comparator deactivates
2 the first transistor if the voltage across the resistor is greater than a second
3 predetermined threshold.